

10/053,072

Attorney Docket No.: 42P11135

Amendments to the Claims

1. (previously presented) A method of modeling a particle system composed of particles having attributes, comprising:
receiving, by a client, a definition of a particle control path from a server;
modifying, by the client, at least one attribute of a particle based on a distance between the particle and the particle control path; and
rendering the particles on a client display device.

Claim 2. (previously presented) The method of claim 1, further comprising:
receiving particle attribute information; and
generating, by the client, a set of attributes based on the particle attribute information.

Claim 3. (previously presented) The method of claim 1, wherein receiving comprises:
receiving, from the server, coordinates for a set of points that are continuously connected using a mathematical construct; and
receiving, from the server, a control algorithm corresponding to the particle control path.

Claim 4. (original) The method of claim 3, wherein the mathematical construct comprises a spline curve.

Claim 5. (original) The method of claim 4, wherein the spline curve comprises a Catmull-Rom spline curve.

Claim 6. (previously presented) The method of claim 4, wherein modifying further comprises:
determining a distance between the particle and a closest point on the particle control path; and
determining an amount of change to the particle attribute based on the distance.

10/053,072

Attorney Docket No.: 42P11135

Claim 7. (original) The method of claim 4, wherein the control algorithm is defined to change at least one of a position attribute, a color attribute and a size attribute of the particle during an up-date cycle.

Claim 8. (original) The method of claim 7, further comprising:
determining an occurrence of the up-date cycle according to one of a particle's age, position, color and size.

Claim 9. (original) The method of claim 6, wherein modifying further comprises:
modifying the particle attribute an amount that varies based on the distance.

Claim 10. (original) The method of claim 6, wherein the particle system is a three-dimensional particle system and the particles are defined by three-dimensional coordinates.

Claim 11. (previously presented) An article comprising a machine-readable medium that stores machine-executable instructions for modeling a particle system composed of particles having attributes, the instructions causing a machine to:

- receive, by a client, a particle control path definition, from a server;
- modify, by the client, at least one attribute of a particle based on a distance between the particle and the particle control path; and
- render the particles, on a client display device.

Claim 12. (previously presented) The article of claim 11, further comprising instructions that cause the machine to:

- receive particle attribute information; and
- generate, by the client, a set of attributes based on the particle attribute information.

Claim 13. (previously presented) The article of claim 11, wherein receive comprises:
receive, from the server, coordinates for a set of points;
connect each of the set of points continuously based on a mathematical construct; and

10/053,072

Attorney Docket No.: 42P11135

receiving, from the server, a control algorithm definition corresponding to the particle control path.

Claim 14. (original) The article of claim 13, wherein the mathematical construct comprises a spline curve.

Claim 15. (original) The article of claim 14, wherein the spline curve comprises a Catmull-Rom spline curve.

Claim 16. (previously presented) The article of claim 14, wherein modifying further comprises instructions that cause the machine to:

determine a distance between the particle and a closest point on the particle control path;
and

determine an amount of change to the particle attribute based on the distance.

Claim 17. (previously presented) The article of claim 14, wherein the control algorithm is defined to change at least one of a position attribute, a color attribute and a size attribute of the particle during an up-date cycle.

Claim 18. (original) The article of claim 17, further comprising instructions that cause the machine to:

determine an occurrence of the up-date cycle according to one of a particle's age,
position, color and size.

Claim 19. (original) The article of claim 16, wherein modifying further comprises instructions causing the machine to:

modify the particle attribute an amount that varies based on the distance.

Claim 20. (original) The article of claim 16, wherein the particle system is a three-dimensional particle system and the particles are defined by three-dimensional coordinates.

10/053,072

Attorney Docket No.: 42P11135

Claim 21. (currently amended) [[An]] A client system for modeling a particle system composed of particles having attributes, comprising:

- a memory that stores executable instructions; and
- a processor that executes the instructions to:
 - receive a particle control path definition, from a server;
 - modify at least one attribute of a particle based on a distance between the particle and the particle control path; and
 - render the particles on a display device coupled to the client system.

Claim 22. (previously presented) The client system of claim 21, wherein the processor executes instruction to:

- receive particle attribute information; and
- generate a set of attributes based on the particle attribute information.

Claim 23. (previously presented) The client system of claim 21, wherein receive comprises:

- receive coordinates for a set of points from the server;
- connect continuously each of the set of points using a mathematical construct; and
- receive a control algorithm definition corresponding to the particle control path from the server.

Claim 24. (previously presented) The client system of claim 23, wherein the mathematical construct comprises a spline curve.

Claim 25. (previously presented) The client system of claim 24, wherein the spline curve comprises a Catmull-Rom spline curve.

Claim 26. (previously presented) The client system of claim 25, wherein modifying further comprises instructions to be executed by the processor to:

10/053,072

Attorney Docket No.: 42P11135

determine a distance between the particle and a closest point on the particle control path;
and

determine an amount of change to the particle attribute based on the distance.

Claim 27. (previously presented) The client system of claim 24, wherein the control algorithm is defined to change at least one of a position attribute, a color attribute and a size attribute of the particle during an up-date cycle.

Claim 28. (previously presented) The client system of claim 27, further comprising instructions to be executed by the processor to:

determine an occurrence of the up-date cycle according to one of a particle's age, position, color and size.

Claim 29. (previously presented) The client system of claim 26, wherein modifying further comprises instructions to be executed by the processor to:

modify the particle attribute an amount that varies based on the distance.

Claim 30. (previously presented) The client system of claim 26, wherein the particle system is a three-dimensional particle system and the particles are defined by three-dimensional coordinates.